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WASHINGTON, DC 20004

EXAMINER

TARAE, CATHERINE MICHELLE

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3623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/700,509	Applicant(s) KELLY ET AL.	
	Examiner C. Michelle Tarae	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a Non-Final Office Action in response to the communication received on November 5, 2003. Claims 1-21 are now pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 7-15 and 21 are rejected under 35 U.S.C. 102(a,e) as being anticipated by Bushey et al. (U.S. 6,389,400).

As per claims 1 and 21, Bushey et al. discloses a dialog management system for communication between an enterprise and customers, the system comprising:

an incoming dialog manager for receiving information from customers and for writing the information to memory (col. 6, lines 53-61; col. 8, lines 36-47; A customer seeking customer support contacts the company via telephone, Internet or in-person.);

a segmentation manager for operating in real time to read said received information, to dynamically allocate a customer to a segment, and to provide a

segmentation decision (col. 6, lines 60-67; Based on information gathered from the customer, the customer is placed into a customer group.); and

a feedback manager for using said segmentation decision and stored customer data to generate a feedback message for a customer in real time (col. 8, lines 25-30; A best-matched agent is determined for assisting the customer and generating a feedback message, or responding to the customer. The interaction occurs in “real-time” as the incoming customer request is processed and routed when it is received.).

As per claim 2, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the dialog management system interfaces with a plurality of enterprise sub-systems to perform integrated customer dialog (col. 8, lines 36-47).

As per claim 3, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the incoming dialog manager controls a unified customer profile database on behalf of all of the sub-systems (col. 9, lines 55-67).

As per claim 4, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the segmentation manager performs offline segmentation analysis using data retrieved from a customer profile database maintained by the incoming dialog manager (col. 7, lines 55-67; col. 9, lines 15-18; Customer models may be generated periodically or created in advance.).

As per claim 7, Bushey et al. discloses a dialog management system as claimed in claim 1, further comprising a rules editor for user editing of segmentation rules (col. 7, lines 5-15; The construction of agent and customer models, or rules, is provided for.).

As per claim 8, Bushey et al. discloses a dialog management system as claimed in claim 7, wherein there are a plurality of segmentation models, at least some of which are modified by the rules editor (col. 7, lines 5-15; The construction of agent and customer models, or rules, is provided for.).

As per claim 9, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the segmentation manager executes a bias computation process, in which bias is determined for each question in a dialog, bias values are determined for all questions in total, and bias is determined for a model after processing of a plurality of dialogs (col. 3, lines 56-59; col. 11, lines 8-12 and 25-26; Biases, or weights for customer questions are determined.).

As per claim 10, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the segmentation manager executes a confidence rating process to determine a confidence value for a segmentation decision (col. 10, lines 15-24; A match score, or confidence value, is determined for a segmentation decision.).

As per claim 11, Bushey et al. discloses a dialog management system as claimed in claim 10, wherein said process allocates an importance rating to each question, determines the importance of each question in the context of the dialog and uses these values to allocate a confidence rating to a set of customer responses (col. 3, lines 56-59; col. 11, lines 8-12, 25-26 and 29-31; Biases, or weights for customer questions are determined, where the weights may reflect importance.).

As per claim 12, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the segmentation manager executes a separation process

to determine a degree of difference between the segmentation decision and a next segment (col. 7, lines 1-4; col. 10, lines 25-35; A threshold match value is used to segment or match customers to agents.).

As per claim 13, Bushey et al. discloses a dialog management system as claimed in claim 12, in which the segmentation manager determines a primary separation between a highest and second segments, and a secondary separation between the second and a third segment and applies boosting in the primary and secondary separation values to determine a separation confidence value (col. 7, lines 1-4; col. 10, lines 25-35; Each agent has their own threshold value.).

As per claim 14, Bushey et al. discloses a dialog management system as claimed in claim 1 wherein the segmentation manager performs clustering for data mining to execute a segmentation model (col. 6, line 53-col. 7, line 4).

As per claim 15, Bushey et al. discloses a dialog management system as claimed in claim 1, wherein the feedback manager associates pre-set customer questions with segments, and retrieves these in real time in response to receiving a segmentation decision (col. 6, line 53-col. 7, line 4; Each agent is associated with pre-set customer questions/issues and customer models they are best suited to service.).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6, 16 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushey et al. (U.S. 6,389,400) as applied above.

As per claims 5-6, Bushey et al. does not expressly disclose the incoming dialog, segmentation, and feedback dialog managers achieve real-time closed loop dialog management by pipelining or wherein the pipelining involves each manager passing an output to the next manager in turn, and a session controller maintaining a session continuity between an outgoing message from the feedback dialog manner and the incoming dialog manager. However, Bushey et al. does disclose performing intelligent customer request routing to a best-matched agent (col. 7, lines 52-55; col. 8, lines 1-5 and 25-30). Examiner takes Official Notice that performing pipelining in a customer service environment is old and well known as it provides for workflow management where several lines of approval may be necessary. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Bushey et al. to achieve real-time closed loop dialog management by pipelining as doing so ensures that the requisite approval or managers have viewed the customer feedback, thereby guaranteeing that such feedback is proper.

As per claim 16, Bushey et al. does not expressly disclose a dialog management system as claimed in claim 1, wherein the feedback and the incoming dialog managers download programs to client systems for execution locally under instructions from a customer. However, Official Notice is taken that it is old and well known in the art of customer service for customer service personnel to download programs to client systems for execution locally under instructions from a customer. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Bushey et al. to download programs to client systems for execution locally under instructions from a customer as doing so provides added convenience and efficiency to the customer as a local program usually tends to run faster than one being accessed remotely over a network.

As per claim 19, Bushey et al. does not expressly disclose a dialog management system as claimed in claim 1, wherein the incoming dialog manager accesses in real time a rules base comprising an editor for user editing of rules for receiving data. However, Official Notice is taken that access to a rules editor in real time is old and well known in the art of customer service. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Bushey et al. to have the incoming dialog manager access in real time a rules base comprising an editor for user editing of rules for receiving data as doing so allows managers to quickly alter rules that affect how incoming calls are routed/handled, thereby enabling managers to respond quickly to supply/demand issues and to ensure that the best suited agent is receiving the call.

As per claim 20, Bushey et al. does not expressly disclose a dialog management system as claimed in claim 1, wherein the system uses a mark-up language protocol for invoking applications and passing messages. However, Official Notice is taken that the use of protocol languages (such as HTML) for invoking applications and passing messages is old and well known. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Bushey et al. to use a mark-up language protocol to invoke applications and pass messages as such protocol languages are often industry standards, thereby having the system merely use an industry-wide standard for performing network-based communications such as invoking applications and passing messages.

6. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushey et al. (U.S. 6,389,400) as applied above, and Lueckhoff et al. (U.S. 7,213,209).

As per claims 17-18, Bushey et al. does not expressly disclose a dialog management system as claimed in claim 1, wherein the feedback manager and the incoming dialog managers access a stored hierarchy to generate a display for customer dialog in a consistent format; or wherein the hierarchy includes, in descending order, subject, category, sub-category, field group, and field for an information value. Lueckhoff et al. discloses wherein the feedback manager and the incoming dialog managers access a stored hierarchy to generate a display for customer dialog in a consistent format; and wherein the hierarchy includes, in descending order, subject, category, sub-category, field group, and field for an information value (col. 3, line 57-;

col. 8, lines 13-36). Bushey et al. and Lueckhoff et al. are analogous in that both are concerned with aiding interaction between agents and customers. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Bushey et al. to have the feedback manager and the incoming dialog managers access a stored hierarchy to generate a display for customer dialog in a consistent format as doing so enables agents to have high quality of interactions with customers by limiting the number of choices the agents need to make (Lueckhoff et al., col. 2, lines 36-49).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Cogger et al. (U.S. 6,032,184) discusses an integrated interface for web based customer care and trouble management;
- Cogger et al. (U.S. 6,859,783) discusses an integrated interface for web based customer care and trouble management;
- Bauer et al. (U.S. 6,690,788) discusses integrated work management for customer care;
- O'Connor et al. (U.S. 7,127,058) discusses managing communications in a call center;
- Goss (U.S. 6,687,241) discusses an enterprise contact server with enhanced routing features; and

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- Eilbacher et al. (U.S. 6,724,887) discusses analyzing customer communications with a contact center.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Tarae whose telephone number is 571-272-6727. The examiner can normally be reached Monday – Friday from 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Van Doren, can be reached at 571-272-6737.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/C. Michelle Tarae/
Primary Examiner, Art Unit 3623

May 19, 2008